DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 110th Ave NE., P.O. BOX 90012
BELLEVUE, WA 98009-9012

OPTIONAL DETERMINATION OF NON-SIGNIFICANCE (DNS) NOTICE MATERIALS

The attached materials are being sent to you pursuant to the requirements for the Optional DNS Process (WAC 197-11-355). A DNS on the attached proposal is likely. This may be the only opportunity to comment on environmental impacts of the proposal. Mitigation measures from standard codes will apply. Project review may require mitigation regardless of whether an EIS is prepared. A copy of the subsequent threshold determination for this proposal may be obtained upon request.

File No. 18-120633-LI

Project Name/Address: Cherry Crest Pump Station at 2532 127th Ave. NE

Planner: Reilly Pittman

Phone Number: 425-452-4350

Minimum Comment Period: September 13, 2018

Materials included in this Notice:

- ☒ Blue Bulletin
- ☒ Checklist
- ☒ Vicinity Map
- ☒ Plans
- ☒ Other: narrative, photos, rendering

OTHERS TO RECEIVE THIS DOCUMENT:

- ☐ State Department of Fish and Wildlife / Sterwart.Reinbold@dfw.gov;
- ☒ State Department of Ecology, Shoreline Planner N.W. Region / Jobu461@ecy.wa.gov; sepaunit@ecy.wa.gov
- ☐ Army Corps of Engineers
- ☐ Attorney General ecyolyef@atg.wa.gov
- ☐ Muckleshoot Indian Tribe Karen.Walter@muckleshoot.nsn.us; Fisheries.fileroom@muckleshoot.nsn.us

SEPA checklist reviewed by Reilly Pittman on 8/24/18

NT SERVICES DEPARTMENT
ENUE NE
'A 98009-9012

Received
AUG 08 2018
Permit Processing

SEPA Environmental Checklist

If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit the Land Use Desk in the Permit Center between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4) or call or email the Land Use Division at 425-452-4188 or landusereview@bellevuewa.gov. Assistance for the hearing impaired: Dial 711 (Telecommunications Relay Service).

Purpose of checklist:
The City of Bellevue uses this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:
This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies and reports. Please make complete and accurate answers to these questions to the best of your ability in order to avoid delays.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The City may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

PLEASE REMEMBER TO SIGN THE CHECKLIST. Electronic signatures are also acceptable.

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A. Background [help]

1. Name of proposed project, if applicable: [help]
   Cherry Crest Pump Station Replacement Project

2. Name of applicant: [help]
   City of Bellevue

3. Address and phone number of applicant and contact person: [help]
   Jay Hummel
   City of Bellevue Utilities Department
   425-452-4160
   jhummel@bellevuewa.gov

4. Date checklist prepared: [help]
   June 6, 2018

5. Agency requesting checklist: [help]
   City of Bellevue

6. Proposed timing or schedule (including phasing, if applicable): [help]
   The project is scheduled to start construction in Spring/Summer 2019 and be completed by 2020.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. [help]
   No

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. [help]
   Confluence Environmental Company. 2018. Cherry Crest Pump Station and water main replacement critical areas evaluation (King County parcels 154680011009 and 212505910100). Prepared for Murraysmith, Inc., Everett, WA, by Confluence Environmental Company, Seattle, WA.

   HWA (HWA GeoSciences Inc.). 2018. Geotechnical letter report, Cherry Crest Pump Station replacement, Bellevue, Washington. Prepared for Murraysmith, Inc., Tacoma, WA, by HWA GeoSciences Inc., Bothell, WA.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. [help]
   No

10. List any government approvals or permits that will be needed for your proposal, if known. [help]
    City of Bellevue: Clearing/grading permit
    City of Bellevue: Demolition permit

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City of Bellevue: Building permit
City of Bellevue: Mechanical permit
City of Bellevue: Electrical permit
City of Bellevue: Plumbing permit
City of Bellevue: Administrative Conditional Use permit
City of Bellevue: Right-of-Way Use permit

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.) [help]

The proposed project will construct a new booster pump station at the Cherry Crest Reservoir capable of pumping up to 2,600 gallons per minute (gpm) to the PP670 Zone. The project will install approximately 1,800 linear feet (LF) of new 16-inch-diameter PP670 Zone water main from the new pump station and will replace approximately 1,200 LF of new 8-inch-diameter water main to replace the aging asbestos cement main along the route of the proposed new 16-inch-diameter PP670 Zone water main. New onsite stormwater improvements are also included in the project

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. [help]

The proposed project will be located in Section 25, Township 25, Range 5.The pump station site addres is 2532 127th Ave NE, Bellevue. See plans.

B. Environmental Elements [help]

1. Earth [help]

a. General description of the site: [help] (select one): ☐Flat, ☒rolling, ☐hilly, ☐steep slopes, ☐mountainous, other: *Click here to enter text.*

b. What is the steepest slope on the site (approximate percent slope)? [help]

The steepest slope within the proposed work area is 3H:1V (33%).

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils. [help]

According to USDA NRCS (2018), the soils are mapped as

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Alderwood gravelly sandy loam. A geotechnical investigation was conducted for the project and found that soils at the site consist of fill and glacial till deposits (HWA 2018).

USDA NRCS (U.S. Department of Agriculture Natural Resources Conservation Service). 2018. Web soil survey. USDA NRCS Soil Survey Staff, Washington D.C. Available at: http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm (accessed on February 21, 2018).

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. [help]
No

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. [help]
Fill will be used in the area of the existing pump station (to be demolished), as well as the location of the proposed pump station, to achieve the finished floor elevation. Trench excavation and backfilling is required to install piping. Excavation is required to construct the pipe chases and pump cans of the new pump station. Grading is required for the new asphalt access road and parking area south of the new pump station.
All fill for the project will be imported structural fill, because the onsite soils are not suitable for fill.
Grading will occur across the whole project area, approximately 27,000 square feet. Cut is approximately 2,165 cubic yards (CY) and fill is approximately 2,165 CY, which is primarily trench excavation and backfill. Approximately 1,700 CY of the cut and fill amount is associated with water main replacement within the right of way.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. [help]
Erosion could occur as a result of construction activities, particularly earthwork. The potential for erosion will be minimized with adherence to the best management practices (BMPs) specified in the Plans and Specifications.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? [help]
Approximately 65% of the site will be covered with impervious surface after construction.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: [help]
BMPs are physical, structural, and/or managerial practices

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that can prevent or reduce the erosion and pollution of water caused by construction activities. The following mitigation measures and BMPs would be incorporated during construction:

o Construction of the proposed improvements, including staging areas, will be restricted to the project site.

o All debris and spoil material will be transported offsite to an appropriate disposal facility.

o A Stormwater Pollution Prevention Plan (SWPPP), which includes a Temporary Erosion and Sediment Control (TESC) Plan, will be prepared and kept onsite to ensure BMPs are installed and maintained properly.

o Other erosion control measures will be incorporated, as necessary, in accordance with City of Bellevue requirements.

o Erosion control measures could include use of silt fencing, catch basin inlet protection, stabilized construction entrance, and other measures specified in the SWPPP.

o Refueling will take place more than 100 feet from surface waters.

o Filters will be installed in catch basins along the water main extension. Filter installation locations will be in accordance with Best Management Practice C220

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known. [help]
Emissions, related to the use of diesel- and gasoline-powered construction equipment, will occur during the construction. This will be a nominal contribution to emissions compared to background levels. During operation and maintenance of the pump station, emissions from personal vehicles or official City vehicles visiting the site will be the only source. The proposed project would not increase the number of site visits by City staff. This source of emissions is not likely to be significantly different compared to the current background conditions.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. [help]
No

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c. Proposed measures to reduce or control emissions or other impacts to air, if any: [help]
All equipment will include emission reduction features. BMPs for dust control, such as the use of water trucks to suppress dust, will be used.

3. Water [help]

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. [help]
No

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans. [help]
No

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. [help]
None

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. [help]
No

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. [help]
No

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. [help]
No

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. [help]
No

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals…; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. [help]
No waste material will be discharged into the ground.

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c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. [help]
Runoff will primarily consist of stormwater sheet-flow from the existing asphalt onsite. Runoff generally sheet-flows west to east and infiltrates in the heavily wooded area just east of the proposed pump station. Runoff during construction will follow the existing drainage patterns and infiltrate in the wooded area east of the proposed pump station.

2) Could waste materials enter ground or surface waters? If so, generally describe. [help]
Runoff from the construction site has the potential to contain sediment and small amounts of equipment-related materials (motor oil, diesel fuel, hydraulic fluid). BMPs would be implemented to minimize equipment-related materials and sediment from leaving the site and potentially entering surface and ground waters.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe. [help]
No, drainage patterns in the vicinity would not be affected by the proposed project

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any: [help]
The project will be constructed in accordance with applicable state and City of Bellevue permits, which will specify a range of BMPs and TESC measures designed to reduce or control potential surface, ground, or runoff water impacts. BMPs may include installation of catch basin filters and/or other appropriate cover measures. BMPs and TESC measures specific to the site and project will be specified by the City in the construction contract documents, and the construction contractor will be required to implement them.

4. Plants [help]

a. Check the types of vegetation found on the site: [help]
☒deciduous tree: alder, maple, aspen, other: *big leaf maple (Acer macrophyllum)*
☒evergreen tree: fir, cedar, pine, other: *Western hemlock (Tsuga heterophylla), Western red cedar (Thuja plicata), and Douglas fir (Pseudotsuga menziesii)*
☒shrubs
☒grass
☐pasture

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☐crop or grain
☐Orchards, vineyards or other permanent crops.
☐wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other: *Click here to enter text.*
☐water plants: water lily, eelgrass, milfoil, other: *Click here to enter text.*
☐other types of vegetation: *Click here to enter text.*

b. What kind and amount of vegetation will be removed or altered? [help]
A significant number of trees will be protected during construction. However, approximately 6 mature trees and 3 shrubs will need to be removed as part of the project.

c. List threatened and endangered species known to be on or near the site. [help]
None

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: [help]
The site is already landscaped with a mixture of native and non-native plants. Landscaping impacted during construction and not converted to impervious surface would be replaced once construction is complete.

e. List all noxious weeds and invasive species known to be on or near the site. [help]
Himalayan blackberry (Rubus armeniacus) and English ivy (Hedera helix) are present on the site.

5. Animals [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. [help]

Examples include:

birds: ☐hawk, ☐heron, ☐eagle, ☒songbirds, other: *Click here to enter text.*
mammals: ☒deer, ☐bear, ☐elk, ☐beaver, other: *small mammals such as opossum, raccoons, mice, etc.*
fish: ☐bass, ☐salmon, ☐trout, ☐herring, ☐shellfish, other: *Click here to enter text.*

b. List any threatened and endangered species known to be on or near the site. [help]
None

c. Is the site part of a migration route? If so, explain. [help]
No

d. Proposed measures to preserve or enhance wildlife, if any: [help]
None

e. List any invasive animal species known to be on or near the site. [help]

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None

6. Energy and Natural Resources [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc. [help]
Electric for pump station operations and diesel for standby backup generator

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. [help]
No

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: [help]
The pumps will be installed with variable frequency drives (VFDs). The VFDs will allow the energy consumption to be lower during periods of low water demand.

7. Environmental Health [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe. [help]
Potential for spills during construction and operation of pump station backup generator, associated with equipment-related materials (motor oil, diesel fuel, hydraulic fluid).

1) Describe any known or possible contamination at the site from present or past uses. [help]
No known contamination.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity. [help]
Existing utilities (e.g., gas and sanitary sewer) are existing potential hazardous conditions.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project. [help]
Construction materials such as diesel fuel and motor oil may be onsite during construction and operation of the pump station's backup generator.

4) Describe special emergency services that might be required. [help]
None

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5) Proposed measures to reduce or control environmental health hazards, if any: [help]
None

b. Noise [help]

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? [help]
None

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indi-cate what hours noise would come from the site. [help]
Temporary noise will occur during construction, within normal construction hours. The noise may include that emanating from construction equipment as well as temporary increased traffic.

Operational noise from the pump station will be present and may occur continuously. Operational noise from the backup generator will be present in the event of a power failure and during regular operational test.

3) Proposed measures to reduce or control noise impacts, if any: [help]
No measures are proposed to reduce or control noise during construction. However, construction will comply with local noise regualtions.

Noise associated with the pump station will be significantly reduced by the housing facility. Noise from the backup generator will be limited to 75 dB by a sound attenuated enclosure.

8. Land and Shoreline Use [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. [help]
The site is currently a water storage facility, waer pump station, and park. Surrounding land use is residential.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use? [help]
No

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how: [help]
No

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c. Describe any structures on the site. [help]
Water storage tank, water pump station, playground equipment, basketball court

d. Will any structures be demolished? If so, what? [help]
Yes, the existing pump station will demolished and rebuilt.

e. What is the current zoning classification of the site? [help]
Residential 3.5

f. What is the current comprehensive plan designation of the site? [help]
SF-M: Single Family Medium Density - up to 3.5 units per acre

g. If applicable, what is the current shoreline master program designation of the site? [help]
Not applicable

h. Has any part of the site been classified as a critical area by the city or county? If so, specify. [help]
No

i. Approximately how many people would reside or work in the completed project? [help]
None

j. Approximately how many people would the completed project displace? [help]
None

k. Proposed measures to avoid or reduce displacement impacts, if any: [help]
None

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: [help]
None

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any: [help]
None

9. Housing [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. [help]
None

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. [help]
None

c. Proposed measures to reduce or control housing impacts, if any: [help]
None

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10. Aesthetics [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? [help]
The tallest proposed structure is the pump station, which is 17 feet tall to the peak. The primary proposed exterior building materials are concrete masonry unit (CMU) blocks with brick veneer or siding accents, metal doors and metal roof.

b. What views in the immediate vicinity would be altered or obstructed? [help]
None

c. Proposed measures to reduce or control aesthetic impacts, if any: [help]
Architectural finish and landscaping.

11. Light and Glare [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur? [help]
Interior light from the pump station may be emitted through the skylights. This may occur any time operation/maintenance staff are present. Exterior security/flood lights are present.

b. Could light or glare from the finished project be a safety hazard or interfere with views? [help]
No, landscaping will help offset light or glare associated with the finished project.

c. What existing off-site sources of light or glare may affect your proposal? [help]
None

d. Proposed measures to reduce or control light and glare impacts, if any: [help]
Landscaping around the proposed pump station and down-casting fixtures will help reduce light and glare impacts.

12. Recreation [help]

a. What designated and informal recreational opportunities are in the immediate vicinity? [help]
The site is a community park, with playground and picnic tables

b. Would the proposed project displace any existing recreational uses? If so, describe. [help]
No

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: [help]
None

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13. Historic and cultural preservation [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe. [help]
No

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. [help]
No

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. [help]
Surveys and GIS data were used to assess potential impacts.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required. [help]
Not applicable

14. Transportation [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. [help]
127th Avenue NE serves the site; 127th Avenue NE is most easily accessed from NE 24th Street. SR 520 is close by, with the nearest entrance and exit at 124th Avenue NE.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop? [help]
No. The closest bus stop is located at NE 24th Street and 130th Avenue NE

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? [help]
No new parking spaces will be constructed. Four existing parking spaces will be eliminated, but these existing spaces are not open to the public, and the asphalt access will serve as parking for operations and maintenance staff.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). [help]
No

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air

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transportation? If so, generally describe. [help]
No

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? [help]
Minimal transportation would be generated by this project. Only City operation and maintenance staff would generate traffic, approximately one trip per week under normal conditions.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe. [help]
No

h. Proposed measures to reduce or control transportation impacts, if any: [help]
None

15. Public Services [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. [help]
No

b. Proposed measures to reduce or control direct impacts on public services, if any. [help]
None

16. Utilities [help]

a. Circle utilities currently available at the site: [help]
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other
The existing site has water, phone, underground power, storm sewer, and sanitary sewer.

c. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. [help]
The proposed project will include electric power provided by Puget Sound Energy, and water, storm, and sanitary sewer services provided by the City of Bellevue. Construction activities include: trenching, pipe installation, tapping, building construction, and restoration.

C. Signature [help]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

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Signature: _____

Name of signee: *Jay Hummel*
Position and Agency/Organization: *City of Bellevue, Utilities Department*
Date Submitted: August 6, 2018

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Description of Proposal and Design Intent

Cherry Crest Pump Station Replacement

June 26, 2018

Description of Proposal and Design Intent

Pump Station

The Cherry Crest Pump Station Replacement project will replace the existing booster pump station. The current booster pump station, constructed in 1984, supplies water from the BV400 Zone Cherry Crest Reservoir to the PP550 Zone. This pump station rarely operates and mainly serves as a back-up source when the hydraulic elevation in the Tolt Eastside Supply Line (TESSL) drops below 550 feet or there is high demand. This project is being conducted as part of the City's ongoing Water Pump Station Rehabilitation program (W-91). The project is needed to replace mechanical and electrical equipment that have reached the end of their useful service life, and to ensure the pump station provides a reliable supply of water. The existing pump station will be demolished.

The project site is located in an area zoned Single-Family Residential (R-3.5; 3.5 dwellings per acre) and is consistent with the Comprehensive Plan. While it is zoned residential, it has never been developed for residential use. The facility provides drinking water to the surrounding area; neighboring properties do not serve the same purpose. Upgrades to the site are necessary for reliable pumping capabilities, so the City will be able to continue to provide a secure water supply and adequate fire flow volumes to the community. Continued use of the site for the pump station will not result in increased housing density or traffic in the neighborhood, nor be detrimental to the surrounding uses in any way.

The new pump station would be located on the same site as the existing pump station. The new pump station will be equipped with six pumps, five vertical turbine pumps and one inline vertical pump. All pumps will be equipped with Variable Frequency Drives (VFDs) and controlled based on the pressure in the PP670 Zone. The new pump station will work in conjunction with the existing NE40th / 670 Pump Station to serve the PP670, PP600, and PP550 Zones when the TESSL hydraulic elevation is too low to feed the zones by gravity. The new pump station will be housed in an L-shaped 2,050 square foot building.

Off-Site Water Main

In addition to the pump station replacement, the project proposes to construct approximately 1,800 lf of 16" water main and 1,200 lf of 8" water main. The proposed route of the water mains will be north from the site within 127th Avenue NE, then west within NE 29th Street, and finally north within 126th Avenue NE where the mains will connect to the existing water system within NE 30th Street. The installation of the 16" water main will ensure that the pump station discharge velocities remain below the maximum 10 feet per second. In addition, the proposed 16" water main will alleviate areas of reduced available fire flow.

Building Materials and Color Samples

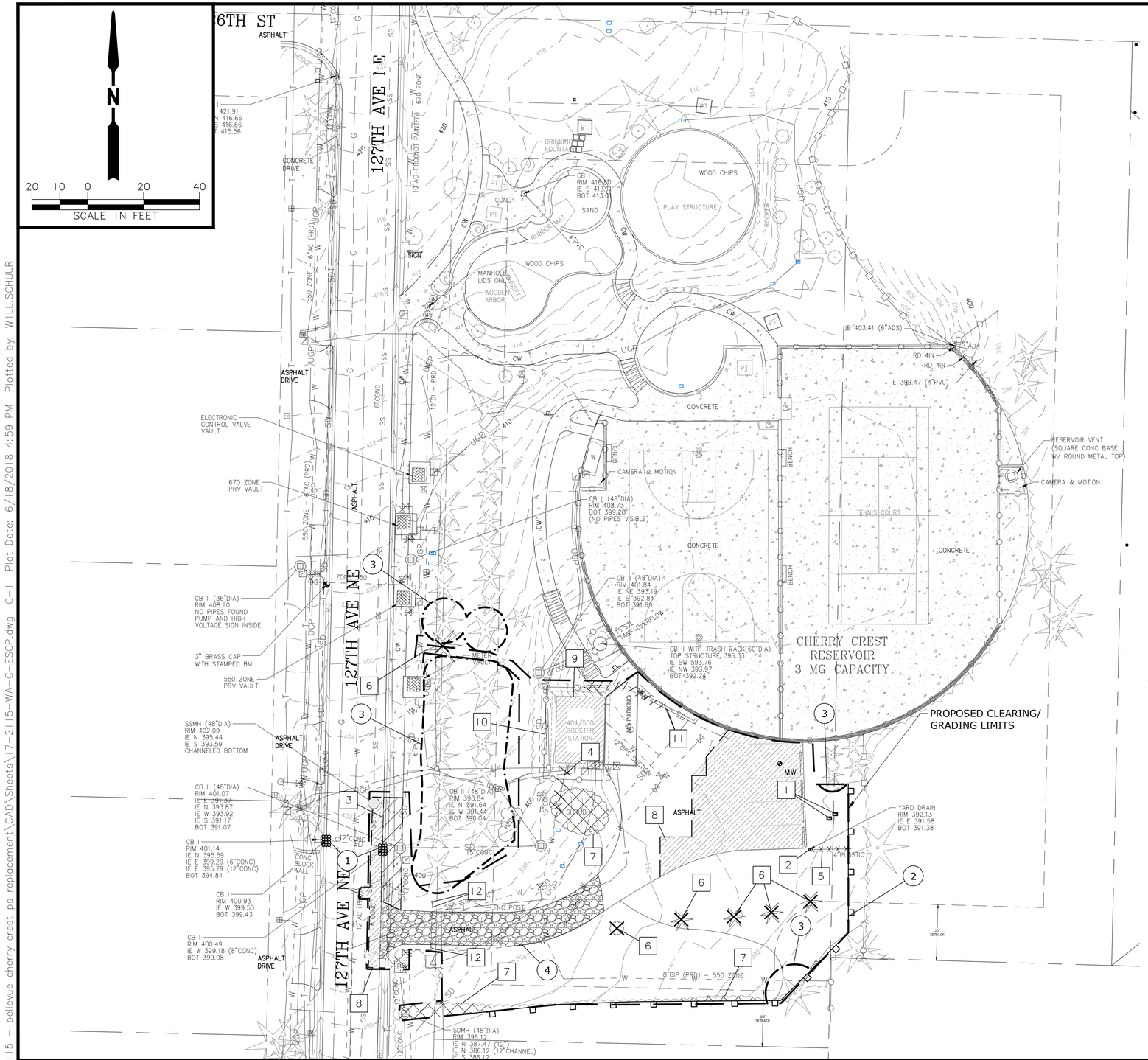
Building materials and colors will be determined later in design.

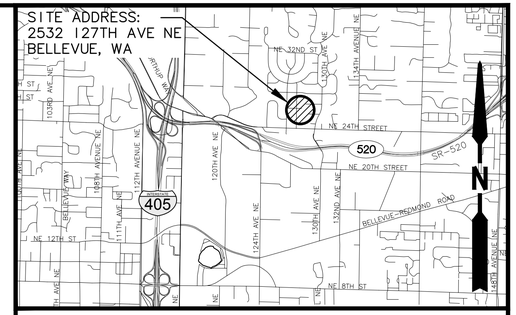
Amenity Plans/Elevations/Proposed Amenity Chart

No amenities are planned for this site.

Bird's Eye Perspective

Please see the figure below for an aerial perspective of the site.





VICINITY MAP

EROSION CONTROL KEY NOTES:

1. INSTALL STORM DRAIN INLET PROTECTION PER WSDOT STD PLAN I-40.20-00
2. INSTALL HIGH VISIBILITY SILT FENCE PER WSDOT STD PLAN I-30.16-00
3. INSTALL TREE PROTECTION FOR TREES TO REMAIN IN PLACE PER COB BMP T101
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE PER WSDOT STD PLAN I-80.10-01

DEMOLITION KEY NOTES:

1	RELOCATE EXISTING IRRIGATION CONTROL VALVES
2	REMOVE EXISTING YARD DRAIN
3	REMOVE S/W AND CURB AND GUTTER FOR S/W & DRIVEWAY APPROACH IMPROVEMENTS, SEE SHT C-4
4	ABANDON EXISTING UTILITY
5	REMOVE EXISTING STORM DRAIN
6	REMOVE EXISTING TREE
7	REMOVE EXISTING SHRUBS
8	SAWCUT
9	DEMOLISH EXISTING PUMP STATION BUILDING
10	DEMOLISH EXISTING FENCE
11	ABANDON EXISTING SAMPLING LINE BETWEEN EXISTING PUMP STATION AND PROPOSED POINT OF CONNECTION
12	DEMOLISH EXISTING GATE AND POSTS

LEGEND:

ABANDON
HIGH VISIBILITY FENCE
HIGH VISIBILITY SILT FENCE
REMOVE
REMOVE CONCRETE
REMOVE ASPHALT
REMOVE SHRUB
SAWCUT
PROPOSED CLEARING/GRADING LIMITS
STORM DRAIN INLET PROTECTION
TREE PROTECTION
TREE TO BE REMOVED

60% SUBMITTAL

NO	DATE	BY	APPR	REVISIONS

murraysmith
1145 BROADWAY
TACOMA, WA 98402
P 253.627.1520

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DO NOT USE FOR CONSTRUCTION
June 2018
65144 murraysmith

Approved By

UTILITIES ENGINEERING MANAGER DATE

PROJECT MANAGER DATE

NCR 6/18/2018
DESIGNED BY DATE
BAW 6/18/2018
DRAWN BY DATE
CHK 6/18/2018
CHECKED BY DATE

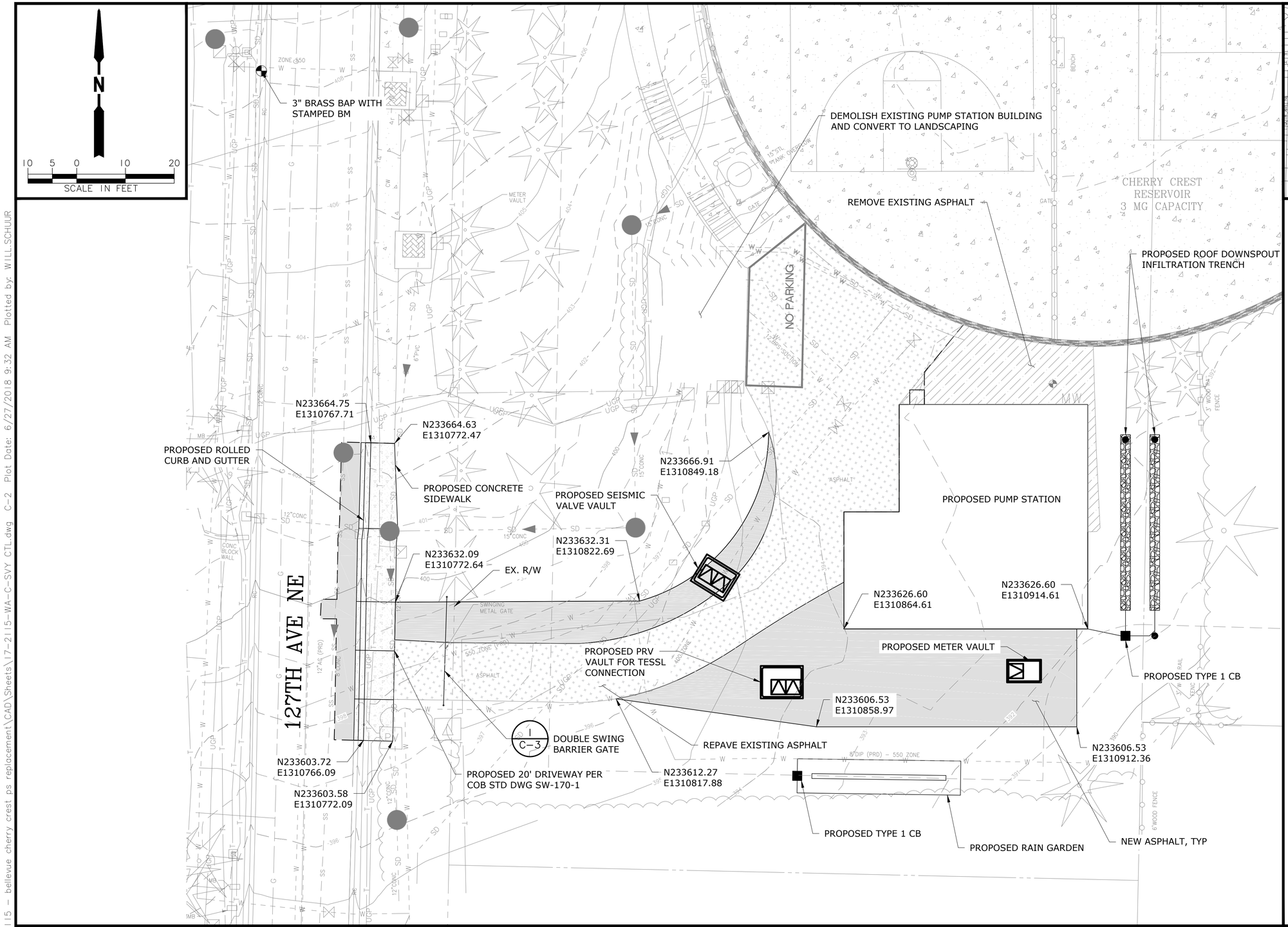
City of Bellevue
UTILITIES DEPARTMENT

CHERRY CREST
PUMP STATION REPLACEMENT

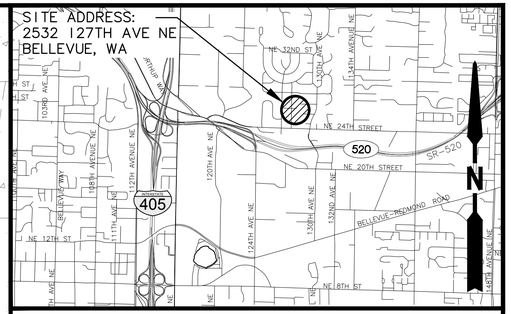
EXISTING CONDITIONS, EROSION CONTROL & SITE PREPARATION PLAN

SEC 21 TWP 25 RGE 5 | SHT C-1 OF X

K:\toc_projects\17\2115 - bellevue cherry crest ps replacement\CAD\Sheets\17-2115-WA-C-ESCP.dwg C-1 Plot Date: 6/18/2018 4:59 PM Plotted by: WILL.SCHUUR



SITE ADDRESS:
2532 127TH AVE NE
BELLEVUE, WA



VICINITY MAP

BASIS OF BEARING:
WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD 83(2011), AS PRESCRIBED BY THE CITY OF BELLEVUE

BENCHMARK:

BM814
3-1/4" DIAMETER CITY OF BELLEVUE ALUMINUM CAP STAMPED "CITY OF BELLEVUE - SURVEY MONUMENT" W/PUNCH MARK ATOP 2-1/2" DIAMETER IRON PIPE IN CASE AT THE INTERSECTION OF NE 24TH ST AND 126TH AVE NE
ELEVATION = 379.47'

TBM#1
3" BRASS CAP AT TOP OF CURB AT THE WEST SIDE OF 127TH AVE NE, APPROXIMATELY 459.5' NORTH ALONG ROAD CENTERLINE OF 127TH AND 11.9' WEST FROM INTERSECTION MONUMENT OF 127TH AVE NE AND NE 24TH ST
ELEVATION = 408.47'

TBM#2
DHA-50
REBAR AND CAP AT THE EAST SIDE OF 127TH AVE NE, APPROXIMATELY 13.1' EAST AND 3.1' NORTH FROM THE INTERSECTION OF 127TH AVE NE AND NE 26TH ST
ELEVATION = 423.27'

INTRUMENT USED:
THE PRIMARY MEASUREMENT EQUIPMENT UTILIZED IN THE PERFORMANCE OF THIS SURVEY WAS A LEICA MS-60 ELECTRONIC TOTAL STATION, SN# 624750

METHOD USED:
CONVENTIONAL FIELD TRAVERSE TECHNIQUES

HORIZONTAL DATUM:
CITY OF BELLEVUE DATUM
NAD_1983_HARN_STATE PLANE NORTH (FIPS 4601)

VERTICAL DATUM:
NAVD88, US FEET AS PRESCRIBED BY CITY OF BELLEVUE

CONTOUR INTERVAL:
(1') ONE FOOT CONTOURS

60% SUBMITTAL

NO	DATE	BY	APPR	REVISIONS

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P 253.627.1520

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UTILITIES ENGINEERING MANAGER DATE

PROJECT MANAGER DATE

NCR	6/27/2018
DESIGNED BY	DATE
BAW	6/27/2018
DRAWN BY	DATE
CHK	6/27/2018
CHECKED BY	DATE

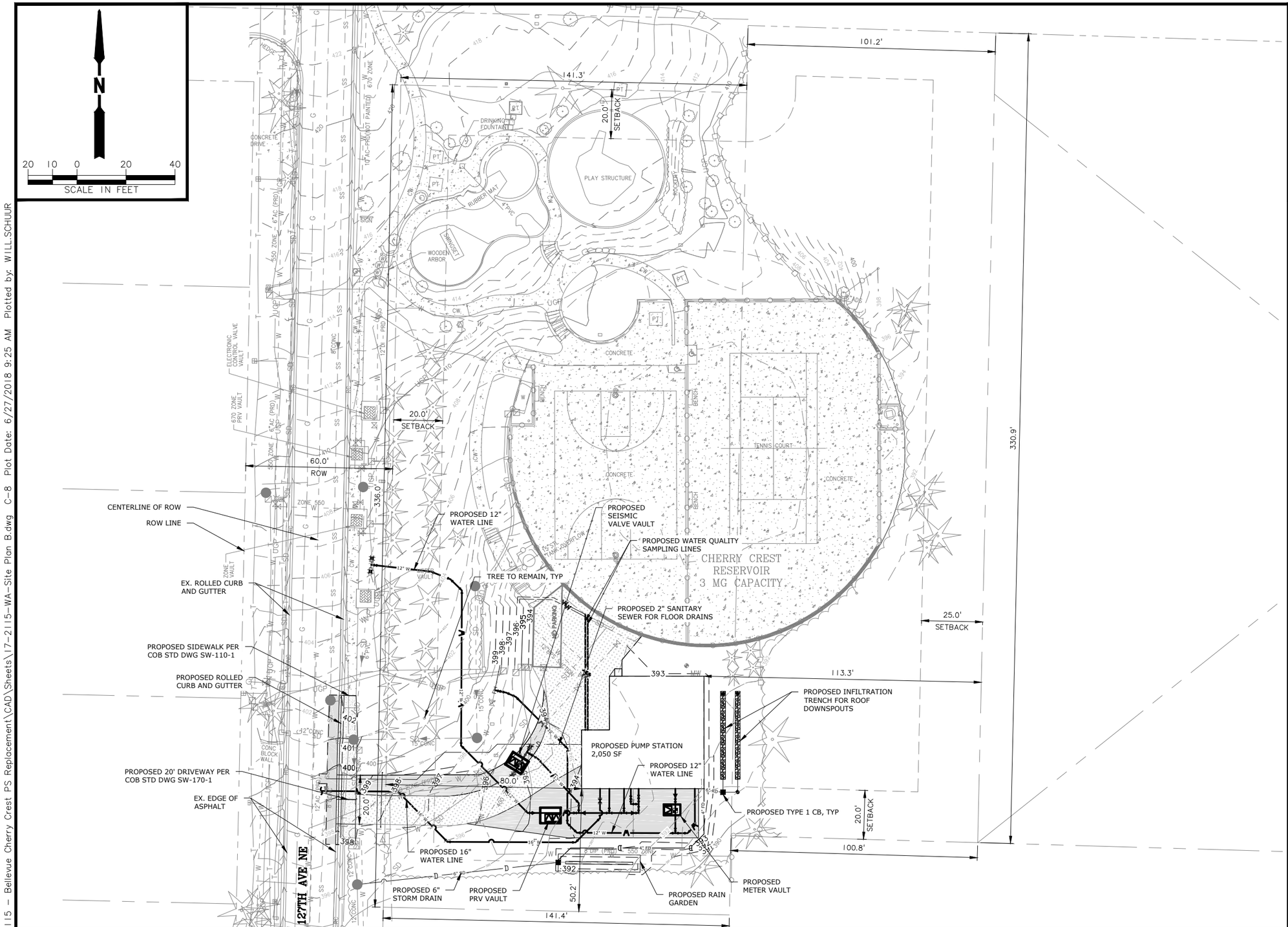
City of Bellevue
UTILITIES DEPARTMENT

CHERRY CREST
PUMP STATION REPLACEMENT

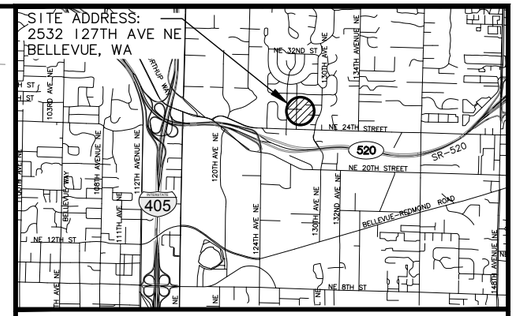
SITE LAYOUT PLAN AND SURVEY CONTROL

SEC 21 TWP 25 RGE 5 | SHT C-2 OF X

K:\toc_projects\17\2115 - bellevue cherry crest ps replacement\CAD\Sheets\17-2115-WA-C-SVY CTL.dwg C-2 Plot Date: 6/27/2018 9:32 AM Plotted by: WILL.SCHUUR



SITE ADDRESS:
2532 127TH AVE NE
BELLEVUE, WA



VICINITY MAP

TOTAL IMPERVIOUS AREA: 8,010 SF

LEGAL DESCRIPTIONS:

1546800110: PLAT LOTS 1,2,3,4 OF PLAT BLOCK 6, CHERRY CREST #2

2125059101: W 100 FT OF N 1/2 OF SW 1/4 OF SE 1/4 OF SE 1/4

PAVEMENT RESTORATION REQUIREMENT:

127TH AVENUE NE IS DESIGNATED AS A GRIND/OVERLAY STREET PER THE CITY'S 2018 TRENCH RESTORATION MAP

PERMIT REVIEW

NO	DATE	BY	APPR	REVISIONS

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June 2018
85144
STATE OF WASHINGTON
WILLIAM A. SCHUUR

Approved By

UTILITIES ENGINEERING MANAGER DATE

PROJECT MANAGER DATE

NCR	6/27/2018
DESIGNED BY	DATE
BAW	6/27/2018
DRAWN BY	DATE
CHK	6/27/2018
CHECKED BY	DATE

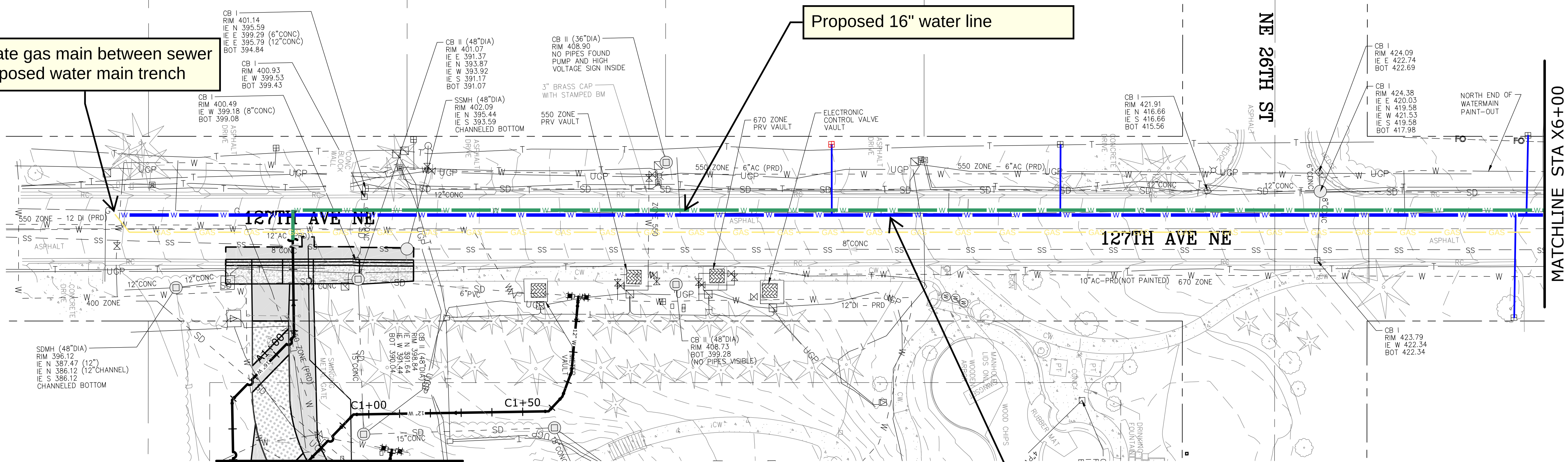
City of Bellevue
UTILITIES DEPARTMENT

CHERRY CREST
PUMP STATION REPLACEMENT

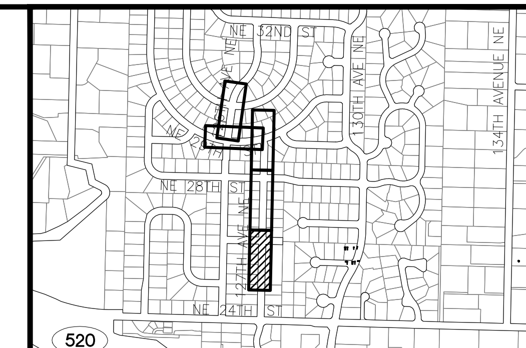
SITE PLAN B

SEC 21 TWP 25 RGE 5 | SHT 1 OF 1

K:\TAC_Projects\17\2115 - Bellevue Cherry Crest PS Replacement\CAD\Sheets\17-2115-WA-Site Plan B.dwg C-8 Plot Date: 6/27/2018 9:25 AM Plotted by: WILL.SCHUUR



PLAN
SCALE: 1"=20'



VICINITY MAP

SCALE IN FEET (20 10 0 20 40)

PZ670 WATERLINE PROFILE
SCALE: 1"=20' H; 1"=5' V

SEPA REVIEW

NO	DATE	BY	APPR	REVISIONS

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UTILITIES ENGINEERING MANAGER DATE
PROJECT MANAGER DATE

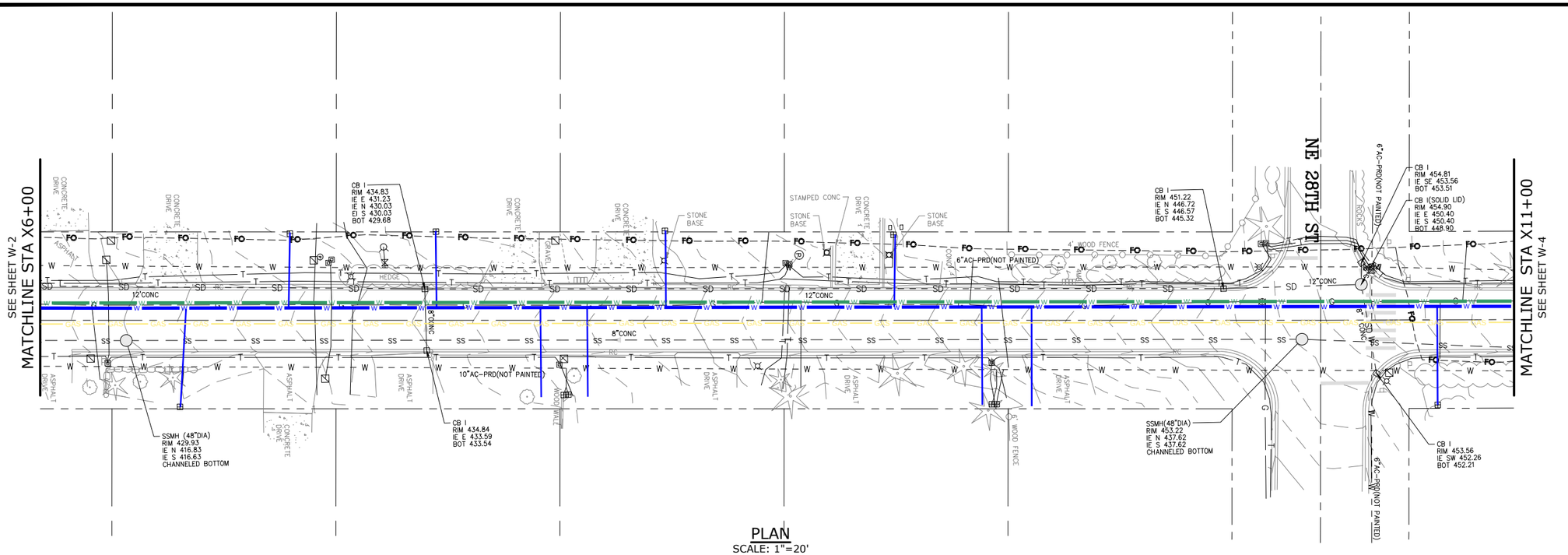
NCR	5/14/2018
DESIGNED BY	DATE
BAW	5/14/2018
DRAWN BY	DATE
CHK	5/14/2018
CHECKED BY	DATE

City of Bellevue
UTILITIES DEPARTMENT

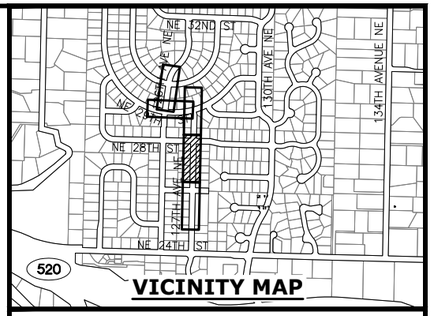
CHERRY CREST
PUMP STATION REPLACEMENT

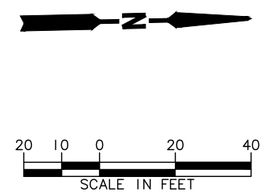
PZ670 WATER MAIN PLAN & PROFILE
STA X1+00 TO STA X6+00

SEC 21 TWP 25 RGE 5 SHT W-2 OF X



PLAN
SCALE: 1"=20'





PZ670 WATERLINE PROFILE
SCALE: 1"=20' H; 1"=5' V

SEPA REVIEW

NO	DATE	BY	APPR	REVISIONS

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May 18

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UTILITIES ENGINEERING MANAGER DATE

PROJECT MANAGER DATE

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BAW 5/14/2018
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CHK 5/14/2018
CHECKED BY DATE

City of Bellevue
UTILITIES DEPARTMENT

CHERRY CREST
PUMP STATION REPLACEMENT

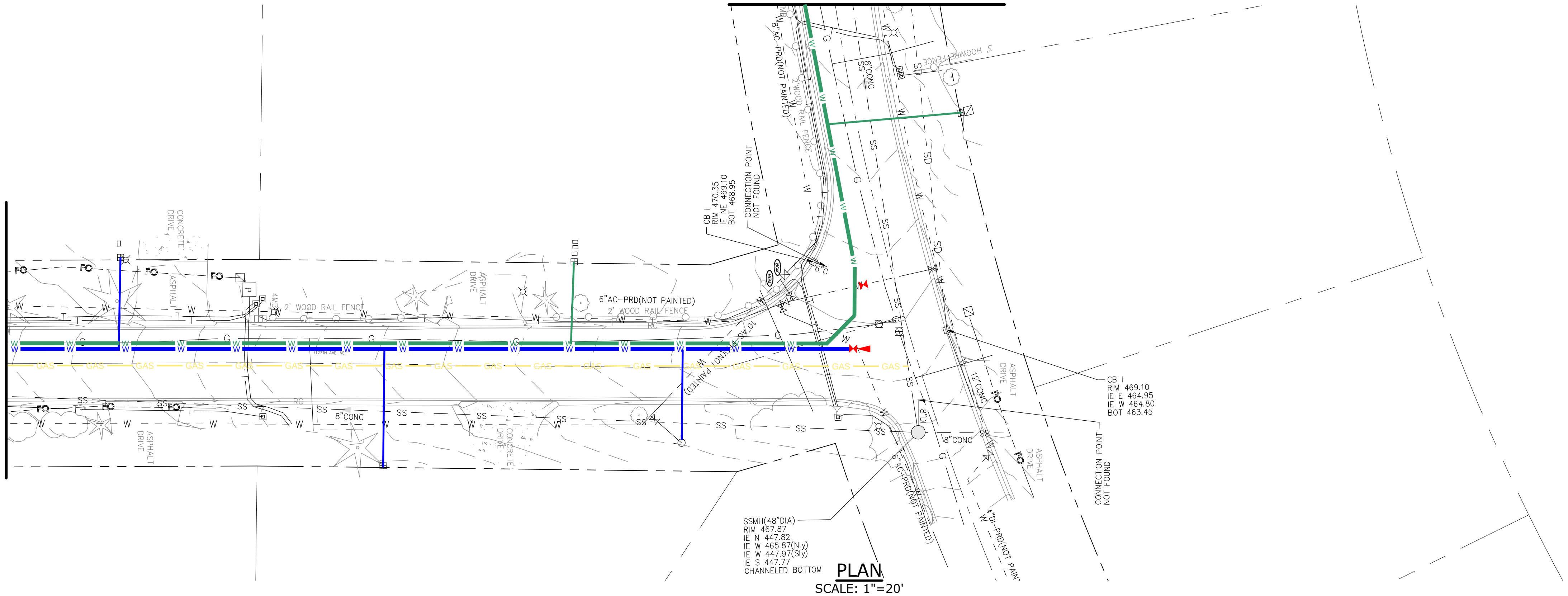
PZ670 WATER MAIN PLAN & PROFILE
STA X6+00 TO STA X11+00

SEC 21 TWP 25 RGE 5 | SHT W-3 OF X

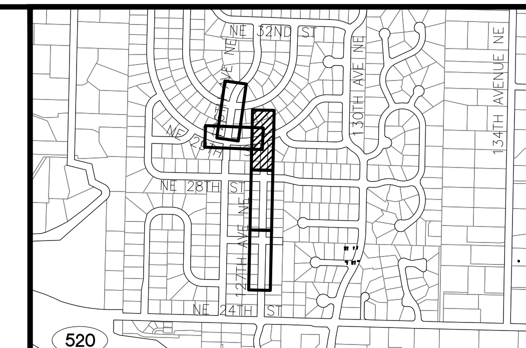
K:\TAC_Projects\17\2115 - Bellevue Cherry Crest PS Replacement\CAD\Sheets\17-2115-WA-C-SCHED B.dwg W-3 Plot Date: 5/14/2018 10:32 AM Plotted by: HCM

SEE SHEET W-5
MATCHLINE STA X16+00

SEE SHEET W-3
MATCHLINE STA X11+00



PLAN
SCALE: 1"=20'



VICINITY MAP

N

20 10 0 20 40
SCALE IN FEET

PZ670 WATERLINE PROFILE
SCALE: 1"=20' H; 1"=5' V

SEPA REVIEW

NO	DATE	BY	APPR	REVISIONS

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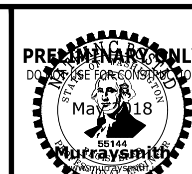

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BAW 5/14/2018
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CHK 5/14/2018
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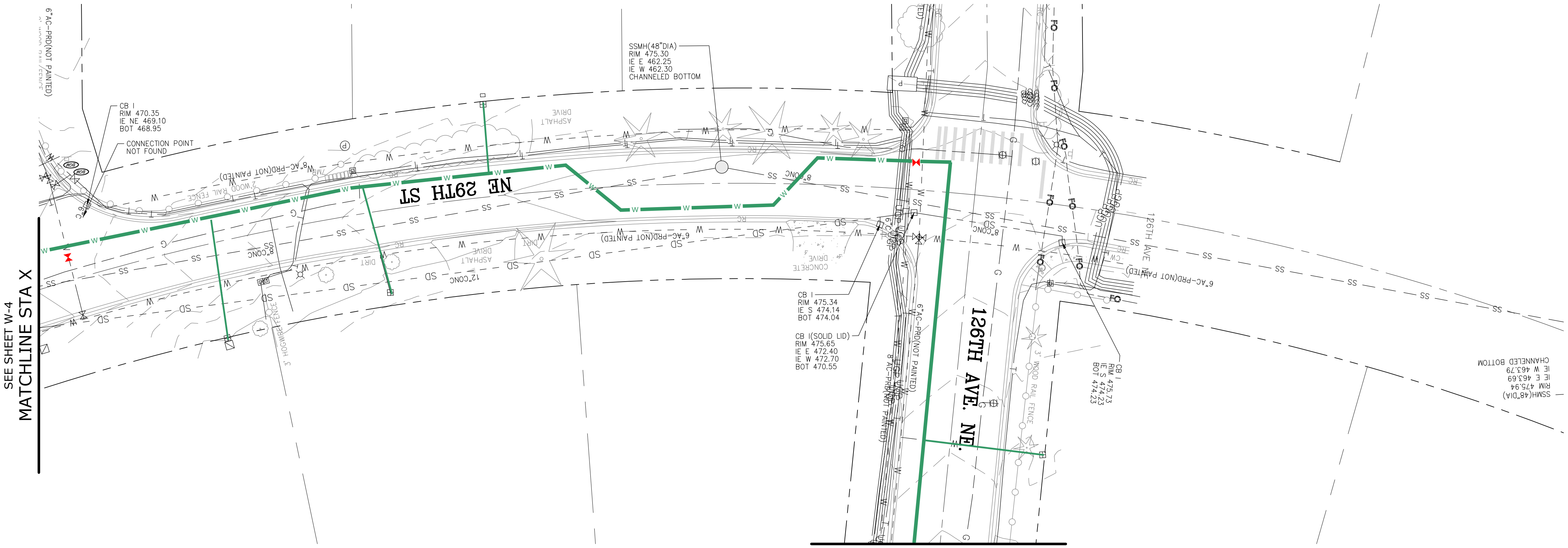
City of Bellevue
UTILITIES DEPARTMENT

CHERRY CREST
PUMP STATION REPLACEMENT

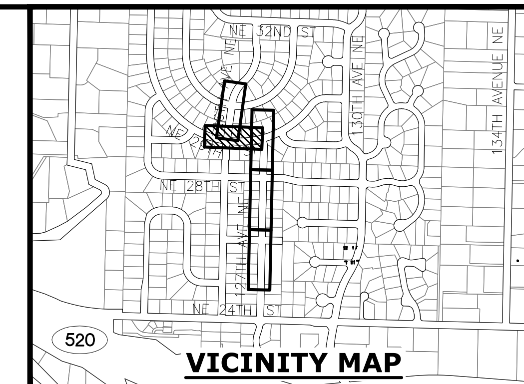
PZ670 WATER MAIN PLAN & PROFILE
STA X11+00 TO STA X16+00

SEC 21 TWP 25 RGE 5 | SHT W-4 OF X

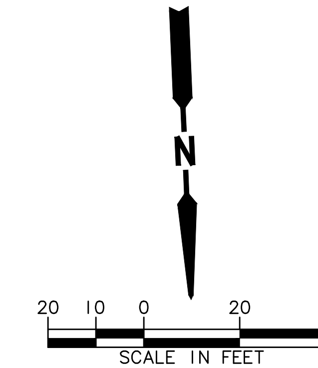


PLAN
SCALE: 1"=20'

MATCHLINE STA X
SEE SHEET W-6



VICINITY MAP



PZ670 WATERLINE PROFILE
SCALE: 1"=20' H; 1"=5' V

SEPA REVIEW

NO	DATE	BY	APPR	REVISIONS

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TACOMA, WA 98402
P 253.627.1520

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May 2018

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UTILITIES ENGINEERING MANAGER DATE
PROJECT MANAGER DATE

NCR 5/14/2018
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BAW 5/14/2018
DRAWN BY DATE
CHK 5/14/2018
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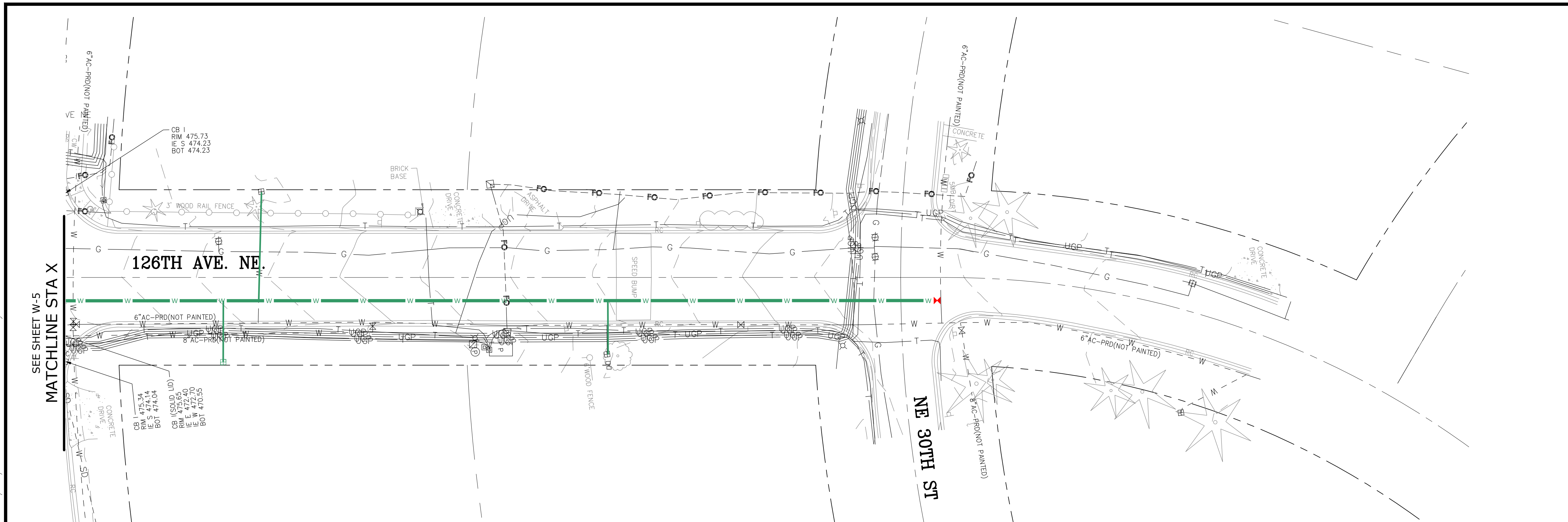
UTILITIES DEPARTMENT

CHERRY CREST
PUMP STATION REPLACEMENT

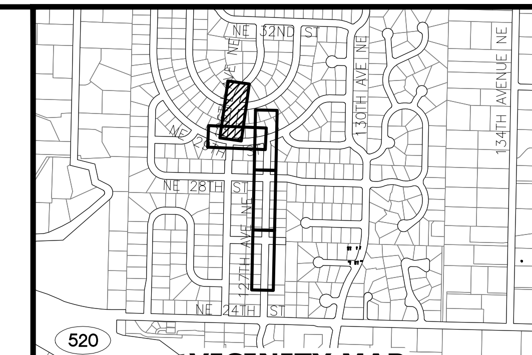
PZ670 WATER MAIN PLAN & PROFILE
STA X16+00 TO STA X19+00

SEC 21 TWP 25 RGE 5 SHT W-5 OF X

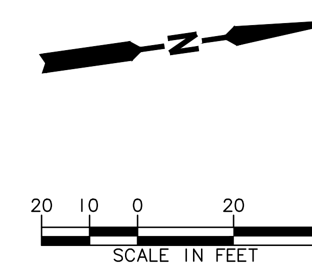
K:\TAC_Projects\17\2115 - Bellevue Cherry Crest PS Replacement\CAD\Sheets\17-2115-WA-C-SCHED B.dwg W-5 Plot Date: 5/14/2018 10:32 AM Plotted by: HCM



PLAN
SCALE: 1"=20'



VICINITY MAP



PZ670 WATERLINE PROFILE
SCALE: 1"=20' H; 1"=5' V

SEPA REVIEW

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CHK	5/14/2018
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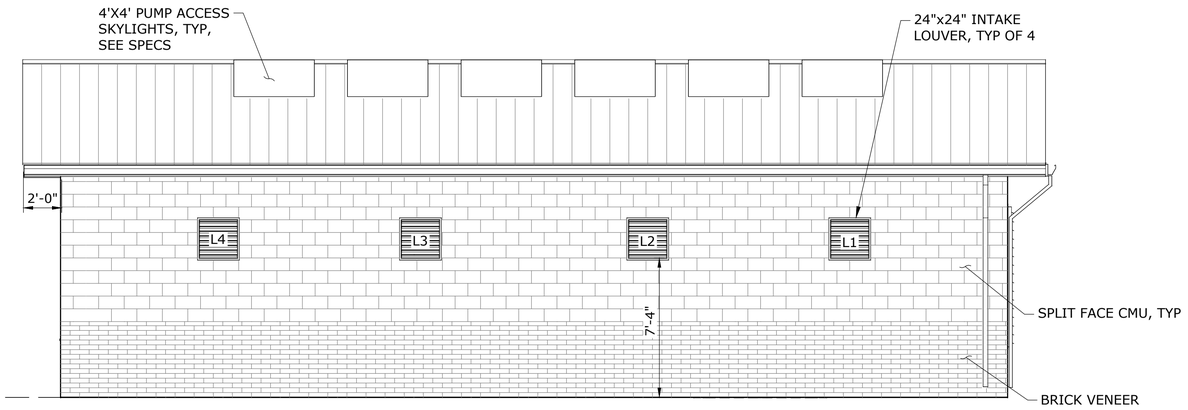
City of Bellevue
UTILITIES DEPARTMENT

CHERRY CREST
PUMP STATION REPLACEMENT

PZ670 WATER MAIN PLAN & PROFILE
STA X11+00 TO STA X16+00

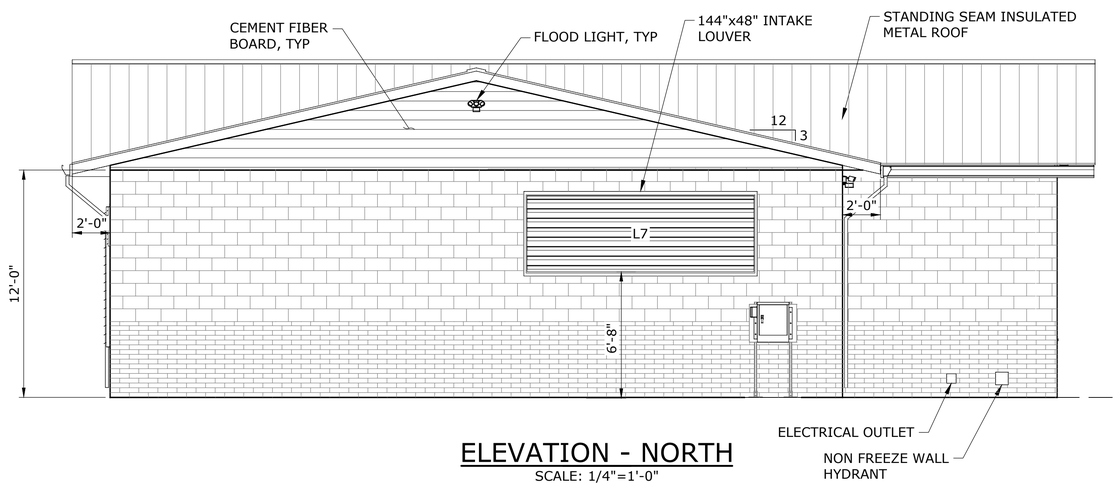
SEC 21 TWP 25 RGE 5 SHT W–6 OF X

K:\TAC_Projects\17\2115 - Bellevue Cherry Crest PS Replacement\CAD\Sheets\17-2115-WA-C-SCHED B.dwg W-6 Plot Date: 5/14/2018 10:32 AM Plotted by: HCM



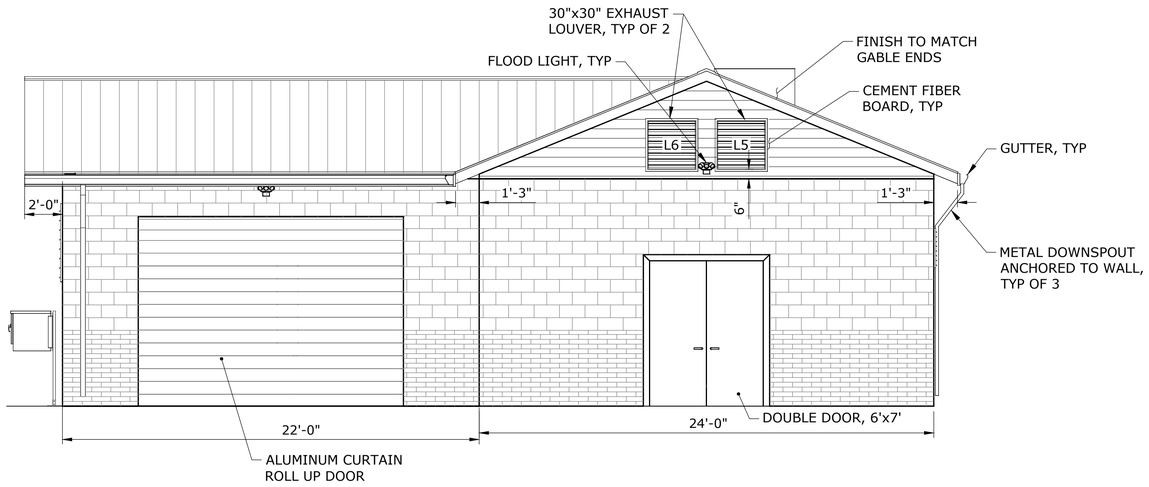
ELEVATION - SOUTH

SCALE: 1/4"=1'-0"



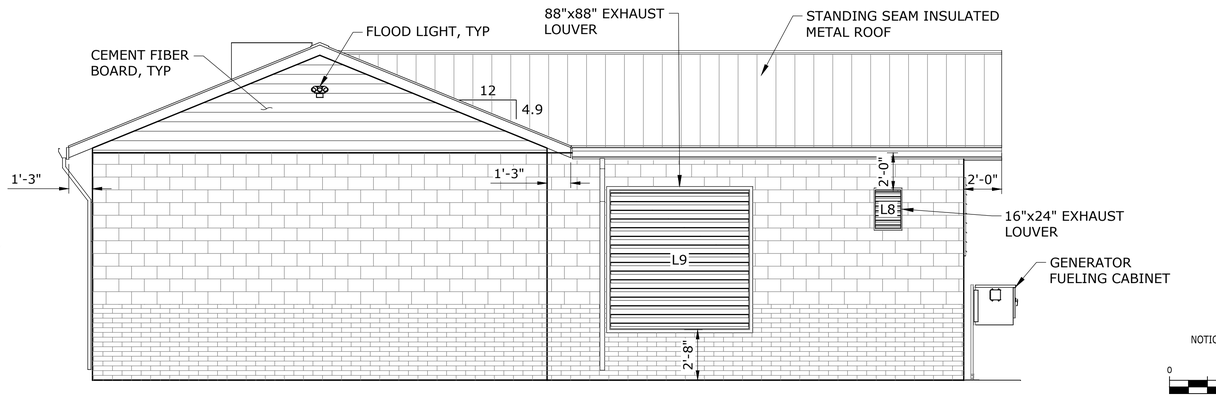
ELEVATION - NORTH

SCALE: 1/4"=1'-0"



ELEVATION - WEST

SCALE: 1/4"=1'-0"



ELEVATION - EAST

SCALE: 1/4"=1'-0"

NOTICE

0 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

PERMIT REVIEW

NO	DATE	BY	APPR	REVISIONS

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UTILITIES ENGINEERING MANAGER DATE

PROJECT MANAGER DATE

NCR	7/9/2018	
DESIGNED BY	DATE	
BAW	7/9/2018	
DRAWN BY	DATE	
CHK	7/9/2018	
CHECKED BY	DATE	

CITY OF BELLEVUE WASHINGTON

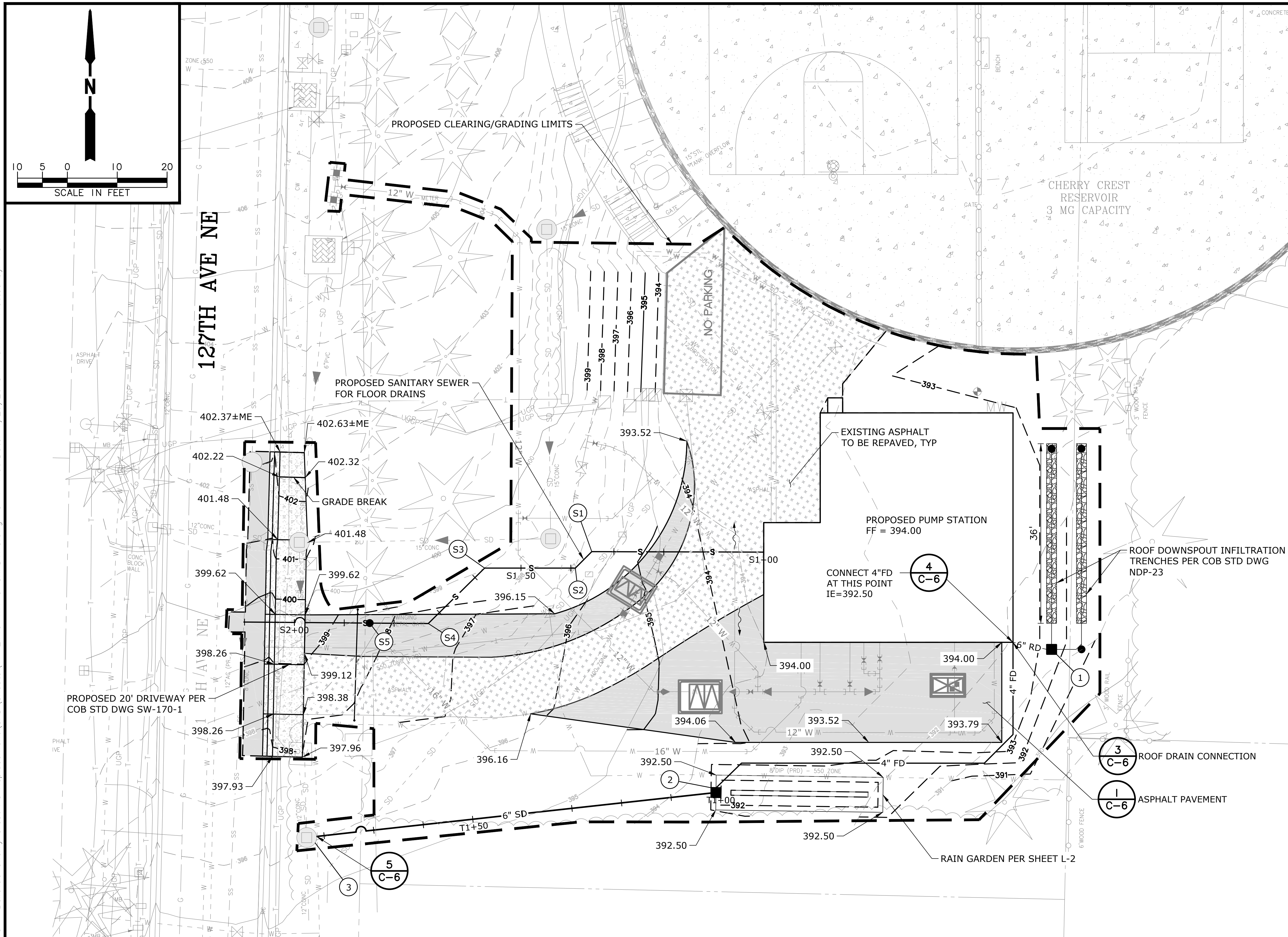
City of Bellevue
UTILITIES DEPARTMENT

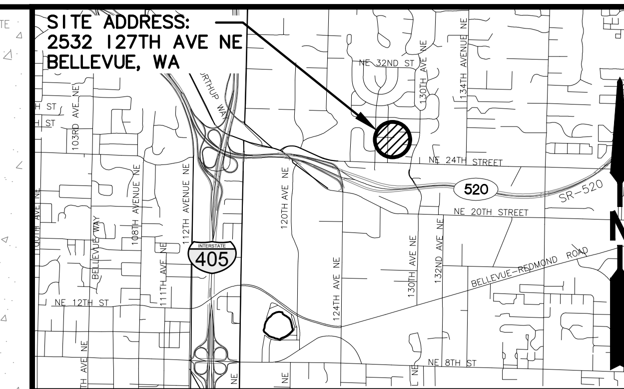
CHERRY CREST
PUMP STATION REPLACEMENT

PUMP STATION ELEVATIONS

SEC 21 TWP 25 RGE 5 | SHT A-2 OF X

k:\toc_projects\17\2115 - bellevue cherry crest ps replacement\CAD\Sheets\17-2115-WA-A SHTS.dwg A-2 Plot Date: 7/9/2018 11:06 AM Plotted by: NATHAN.ROSTAD





VICINITY MAP

INFILTRATION GALLERY DRAIN & RAIN GARDEN DRAIN SCHEDULE:

(1) N233625.18, E1310922.35
TYPE 1 CB W/SOLID LID
RIM: 391.35
IE 6" IN(W)=389.85
IE 6" OUT(N)=389.85
IE 6" OUT(E)=389.85

(2) N233596.46, E1310855.98
TYPE 1 CB
RIM: 392.50
IE 6" OUT(W)=390.00
IE 4" IN (N)=390.84

(3) N233587.44, E1310772.96
EX. SDMH-48"
RIM: 396.12
IE EX. 12" (N)=387.47
IE EX. 12" (N)=386.12
IE EX. 12" (S)=386.12
IE 6" IN (E)=388.33

PUMP STATION FLOOR DRAINS TO SANITARY SEWER PIPING SCHEDULE:

(S1) N233644.77, E1310830.14
1-2" 45° BEND

(S2) N233641.47, E1310826.84
1-2" 45° BEND

(S3) N233641.47, E1310808.63
1-2" 45° BEND

(S4) N233630.36, E1310797.34
1-2" 45° BEND

(S5) N233630.45, E1310785.59
1-6"x2" REDUCER
1-6" WYE
CLEANOUT TO GRADE

PERMIT REVIEW

NO	DATE	BY	APPR	REVISIONS

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Murraysmith

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UTILITIES ENGINEERING MANAGER DATE

PROJECT MANAGER DATE

NCR 7/26/2018
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BAW 7/26/2018
DRAWN BY DATE
CHK 7/26/2018
CHECKED BY DATE

CITY OF BELLEVUE WASHINGTON

City of Bellevue
UTILITIES DEPARTMENT

CHERRY CREST
PUMP STATION REPLACEMENT

SITE GRADING, PAVING AND DRAINAGE PLAN

SEC 21 TWP 25 RGE 5 SHT C-4 OF X

K:\TAC_Projects\17\2115 - Bellevue Cherry Crest PS Replacement\CAD\Sheets\17-2115-WA-C-GRADING.dwg C-4 Plot Date: 7/26/2018 11:31 AM Plotted by: HCM

SCALE

0 10 15 20 30

(FEET)

811

Know what's below.
Call before you dig.

place 3" topsoil and 2" mulch in this area

Cornus nuttallii

place 3" topsoil and 2" mulch in this area

place 3" topsoil and 2" mulch in this area

place 3" topsoil and 2" mulch in this area

Shaded tone area indicates extent of area to be cleared, grubbed, excavated and to receive new topsoil as indicated on Detail ?, Sheet L-? (approx ? SF).

Shaded tone area indicates extent of area to be cleared, grubbed, excavated and to receive new topsoil as indicated on Detail ?, Sheet L-? (approx ? SF).

Soil/Mulch Symbol

Toned area indicates extent of area to be cleared, grubbed, excavated and to receive new topsoil & mulch to the depths indicated on the attached details.

SUPPLEMENTAL topsoil mix shall be a 80% washed sand & 20% pure compost. The soil shall be high in organic content and comprised of fully composted and mature organic materials. No fresh sawdust or other fresh wood by-products shall be added to extend the volume after the composting process.

Bark mulch shall consist of Pacific Garden Mulch (Pacific Topsoils ph: 1-800-884-SOIL)

Plant Schedule

Botanical Name	Common Name	Size	Quantity	Comments
TREES				
Acer circinatum	Vine Maple			
Acer macrophyllum	Big Leaf Maple			
Cornus nuttallii	Pacific Dogwood "Eddie's White Wonder'			
Prunus emarginata	Bitter Cherry			
Rhamnus purshiana	Cascara			
Sorbus sitchensis	Western Mountain Ash			
SHRUBS				
Cornus sericea	Red-twig Dogwood			
Cornus sericea "Flaviramea"	Yellow-twig Dogwood			
Cornus sericea "Kelseyi"	Small Red-twig Dogwood			
Corylus cornuta	Hazelnut			
Gaultheria shallon	Salal			
Oemleria cerasiformis	Indian Plum			
Philadelphus lewisii	Mock Orange			
Physocarpus capitatus	Pacific Ninebark			
Polystichum munitum imbricans	Sword Fern (Sun Form)			
Ribes sanguineum	Flowering Red Currant			
Rubus parviflorus	Thimbleberry			
Smilacina racemosa	False Soloman's Seal			
Spirea betulifolia	Shiny-leaf Spirea			
Spirea douglasii	Hardhack			
Symphoricarpus alba	Snowberry			
FORBS				
Aruncus dioicus	Goatsbeard			
Heuchera micrantha	Alum Root			
Penstemon procerus v. procerus	Little Flowered Penstemon			
Viola sempervirens	Evergreen Violet			
RAINGARDEN				
Aquilegia formosa	Red Columbine			
Athyrium filix-femina	Lady Fern			
Polystichum munitum	Sword Fern			
Lupinus polyphyllus	Large-leaf Lupin			
Mahonia nervosa	Cascade Mahonia			
Penstemon serrulatus	Coast Penstemon			
Sidalcea hendersonii	Henderson's Mallow			
GROUNDCOVER				
Fragaria chiloensis	Coast Strawberry			

Note: All plant installation to take place between October 15 - March 1st unless authorized by the Engineer and Owner.

Maintenance: Enhancement site will be added to the Forest Management maintenance inventory and will be watered and maintained for a minimum of 3 years

1. Compost: Cedar Grove Compost or equivalent product. 100% vegetable compost with no appreciable quantities of sand, gravel, or sawdust.

2. Fertilizer: Slow-release granular, phosphorus-free fertilizer. Follow manufacturer's instructions for application. Keep fertilizer in a weather-tight container while on site. Note that fertilizer is not to be applied in the first year.

60% SUBMITTAL

NO	DATE	BY	APPR

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STATE OF WASHINGTON · RICHARD E. VAN DE MARK · NO. 481 EXP. 4/6/19 · LICENSED LANDSCAPE ARCHITECT

Approved By

UTILITIES ENGINEERING MANAGER DATE

PROJECT MANAGER DATE

RV	11/13/15
DESIGNED BY	DATE
RV	11/13/15
DRAWN BY	DATE
CHECKED BY	DATE

City of Bellevue
UTILITIES DEPARTMENT

CHERRY CREST
PUMP STATION REPLACEMENT

LANDSCAPE RESTORATION PLAN

SEC 21 TWP 25 RGE 5

SHT ____ OF ____

Cherry Crest Pump Station Existing Site Photographs

Photograph 1

Photograph 2

Photograph 3

Photograph 4

Photograph 5